



Capabilities Requirements Documents for Information Systems (IS) and Information Technology (IT)

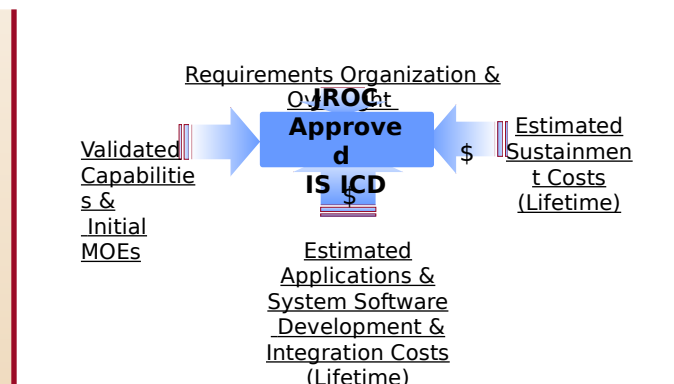
Lesson Objectives

- Review Capabilities Development documents and processes for Information Technology and Information Systems

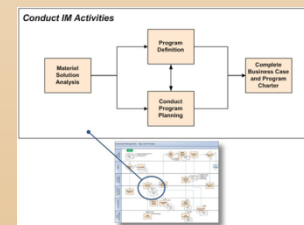
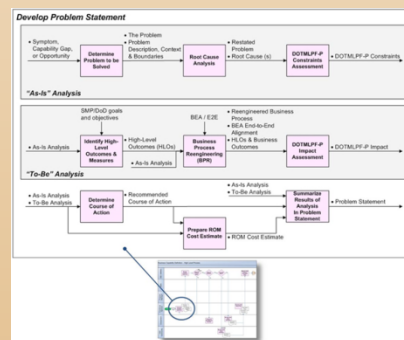
- Know how the JCIDS documents and process are modified when using the IT Box guidance in JCIDS manual for warfighter IT/IS development
- Identify the two Defense Business System Documents that contain capability requirements for business IT/IS development

- Introduce IT Box review exercise – GEMSIS IT Box CDD (conducted Thursday)

IT Box – (current JCIDS manual)



DoDI 5000.02, Encl 12 replaces Defense Acquisition Guidebook Chapter 1





Adapting Capabilities Requirements Documents for IT /IS

- The JCIDS process and documents optimized for MDAP hardware
- Thus JCIDS documents and process tend not to be supportive of the rapid pace of development and deployment IS systems/capabilities needed to meet operational needs.
- Desired Outcome - Provide agile and responsive Capabilities Requirements documents and process to enable rapid development of IS capabilities
- FIVE aspects of the JCIDS process are modified by the “IT Box” in conjunction with changes in the acquisition process, to meet the needs of the operational user so that new capabilities can be delivered rapidly, and adapted as necessitated by changes in the operational environment

- IS development is different from major weapon systems development
 - Modify their processes and documentation expectations accordingly (DODI 5000.02)
- The test and certification communities can deliver more responsive test and certification processes to achieve timely delivery of capabilities
 - Necessitates incremental/iterative development and testing
- Validation authority for managing requirements can be pushed down to a lower level to better enable adjustment to capability deployment schedule and KPP level performance decisions (normally retained as a JROC authority)



Five areas of JCIDS affected by “IT Box” guidance

- Capabilities Document content and supporting Analysis for ICD and CDD
- FCB briefing format
- Validating JROCM format
- Follow on capability document format loosely defined as Requirements Definition Package (RDP) with Capabilities Drops (CD)
- Designation of an Oversight Body with more authority than typically delegated for Joint Capabilities Requirements



Definition of the IT Box -

draft JCIDS Manual : Enclosure B **IS ICD,**
IS CDD

Organization & Oversight

Flag-level oversight thru
[describe]

“Boundaries”
JROC-Approved
IS ICD [or CDD]
[Topic name]

Oversight -
[Name]
Execute - [Name]

Capabilities and Initial Objective Values

- Capability #1 [Describe] = MOE
- Capability #1 [Describe] = MOE
- Etc.. [List the MOEs that specifically apply to this capability]

Hardware Refresh and System Enhancements & Integration:

- Per year = \$XX
- Lifecycle Cost = \$XX
- Rationale....

Application and System Software Development:

- Per year = \$XX
- Lifecycle Cost = \$XX
- Rationale....
- **Biannual status review by the Lead FCB**
- **Revalidation by JCB / JROC if: a) new core capabilities added to the ICD**
b) Increase programmed development and integration funding for a MAIS program beyond the level of funding validated in ICD / CDD
- **CDDs and CPDs required for programs identified as MDAPs**



Applicability of the JCIDS IT Box

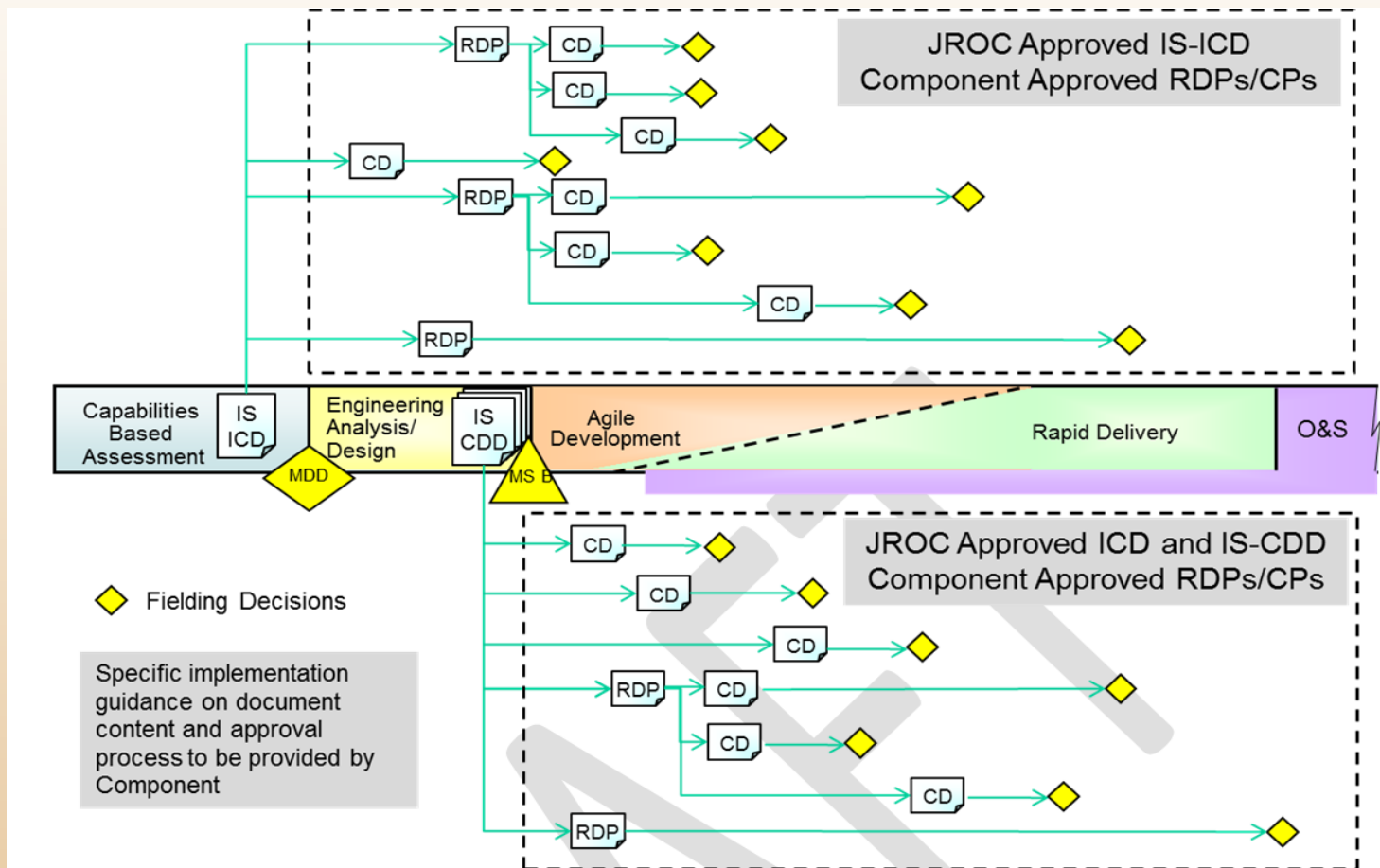
(*see JCIDS Manual IS ICD, IS CDD*)

- Efforts where an IT box may be considered:
 - JROC Gatekeeper oversight (Life cycle program costs \geq \$15 million)
 - Hardware: All hardware associated with an IS-ICD must be COTS/GOTS. Hardware modifications are restricted to those necessary for system integration and enhancements to meet capability requirements. Includes periodic refresh through lifecycle.
 - Software - Development, integration, and acquisition of customized applications, including commercial IS capability solutions with integrated, DOD-specific performance characteristics/standards. Includes continued development and deployment through lifecycle.
- IT box IS NOT appropriate where:
 - Software is embedded as a subset of a capability solution developed under other validated capability requirement documents
 - IT capability can be better addressed by DBS process

DBS: Defense Business Systems
HW: Hardware

COTS: Commercial off the shelf
GOTS: Government off the shelf

IT Box & Requirements Management



- Must meet data requirements for NR KPP certification
 - *CDDs and CPDs required for programs identified as MDAPs (there are currently no MDAP – MAIS programs)*



Defense Business System Oversight and Acquisition model have moved past BCL

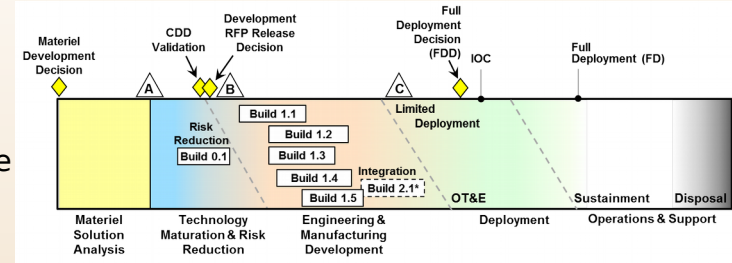
- Applicable to the acquisition of defense business systems that are expected to have a life-cycle cost in excess of \$1 million over the current Future Years Defense Program
- A DBS is an information system, other than a National Security System, operated by, for, or on behalf of the DoD, including:
 - Financial systems
 - Management information systems
 - Financial data feeder systems
 - Information technology and cybersecurity infrastructure used to support business activities, such as:
 - contracting
 - pay and personnel management systems
 - some logistics systems
 - financial planning and budgeting
 - installations management
 - human resource management.



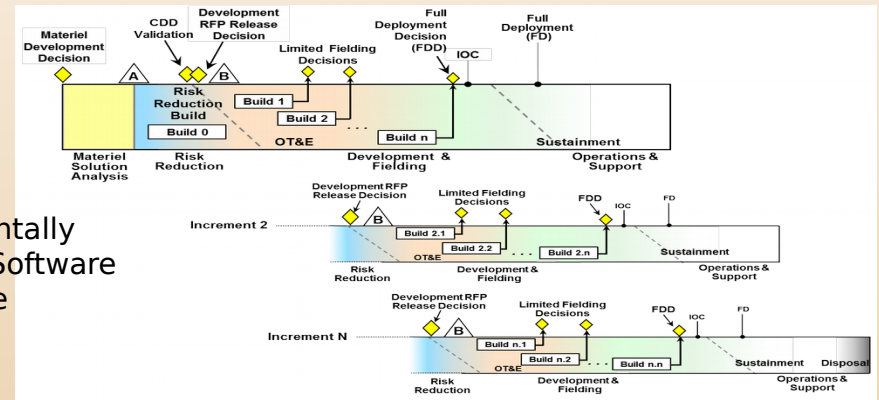
Capabilities Requirements in Business System Lifecycle Documents - DoDI 5000.02 Encl 12

- Problem Statement is documentation prior to MDD
- Updated Problem Statement is documentation after MDD

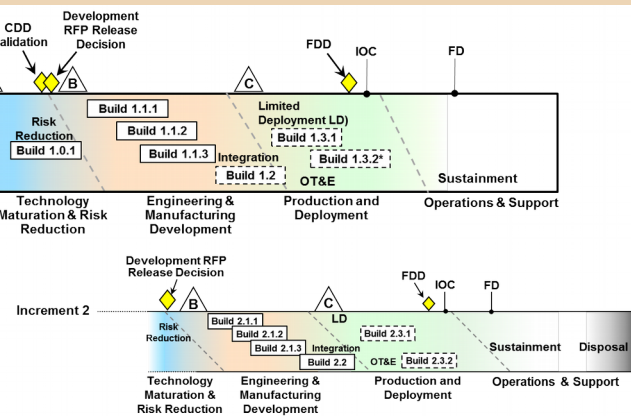
Model 2:
Defense Unique
Software
Intensive
Program



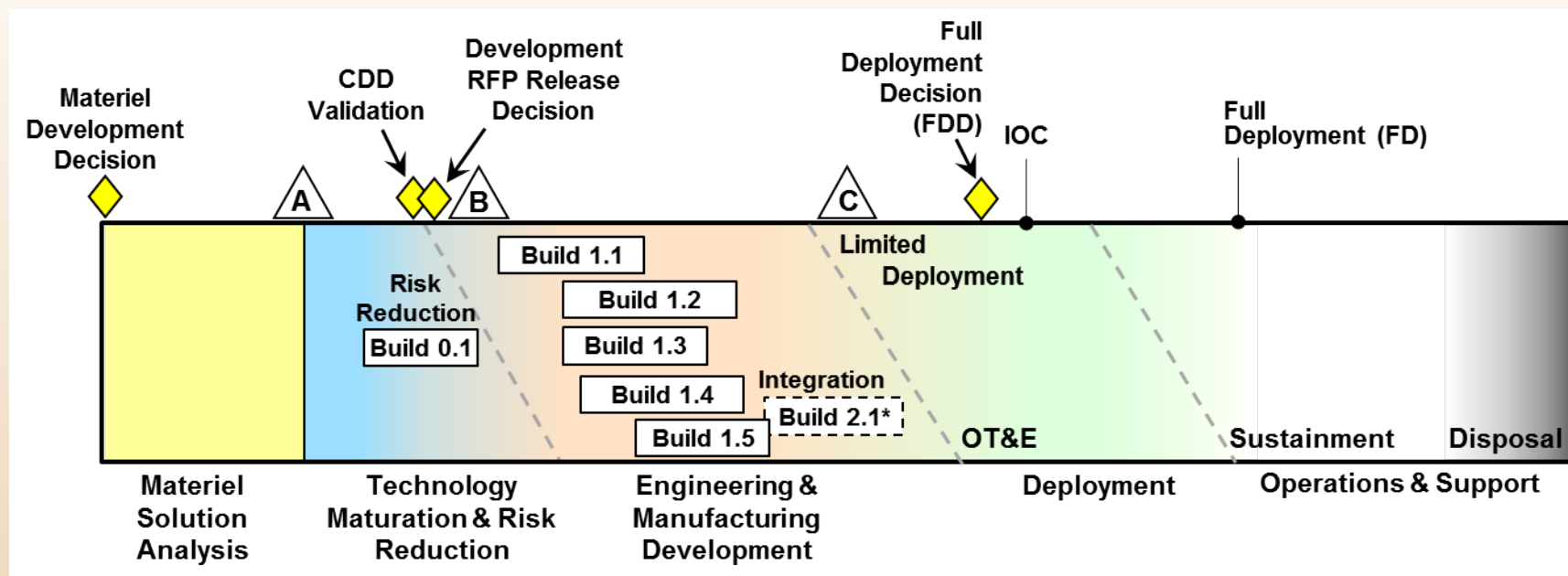
Model 3:
Incrementally
Fielded Software
Intensive
Program



Hybrid Program
B (Software
Dominant)



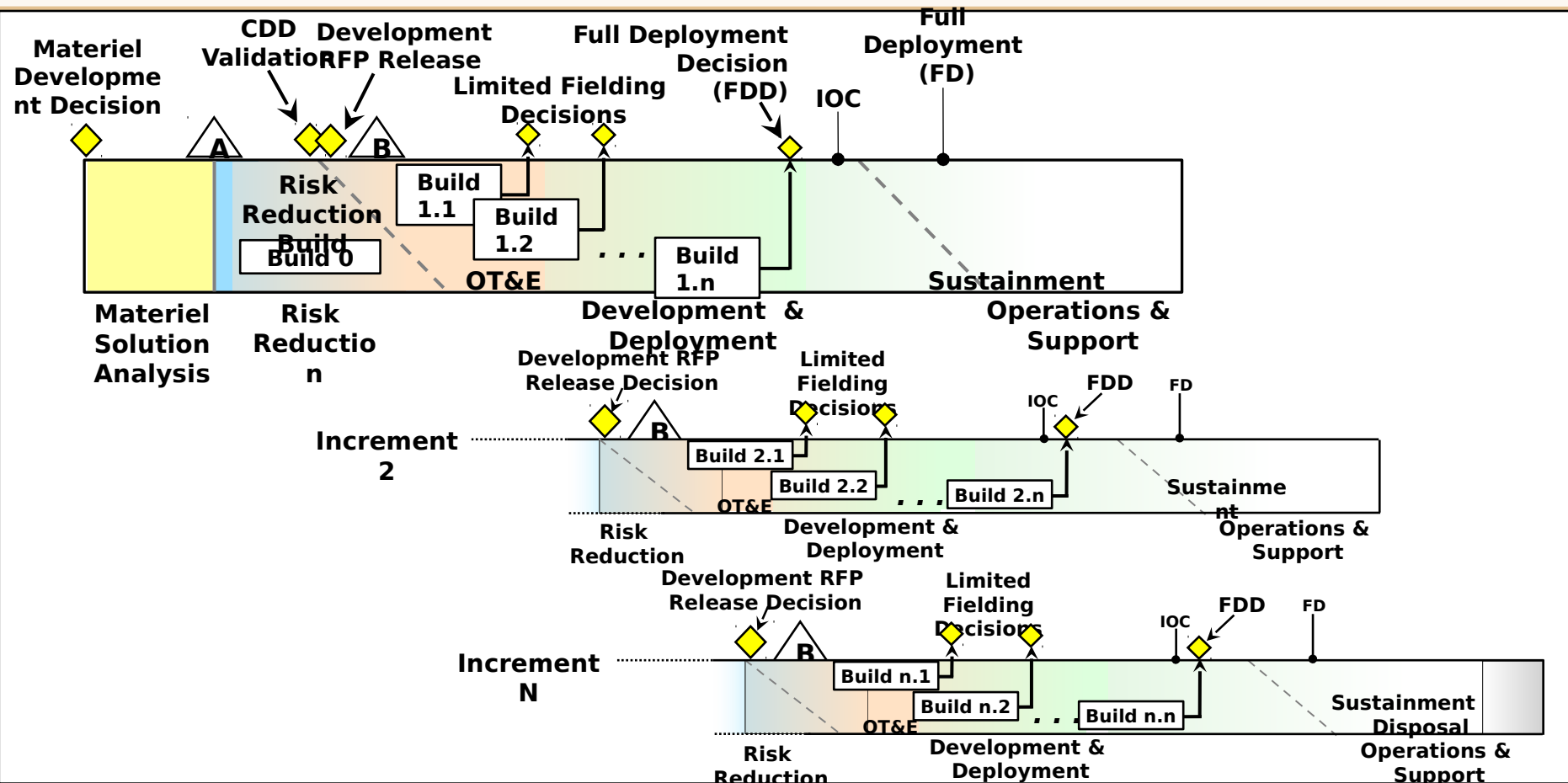
Model 2: Defense Unique Software Intensive Program



- **Complex, usually defense unique, software program that will not be fielded until several software builds have been completed.**
- **Examples: command and control systems and significant upgrades to the combat systems found on major weapons systems such as surface combatants and tactical aircraft.**
- **Several software builds are typically necessary to**



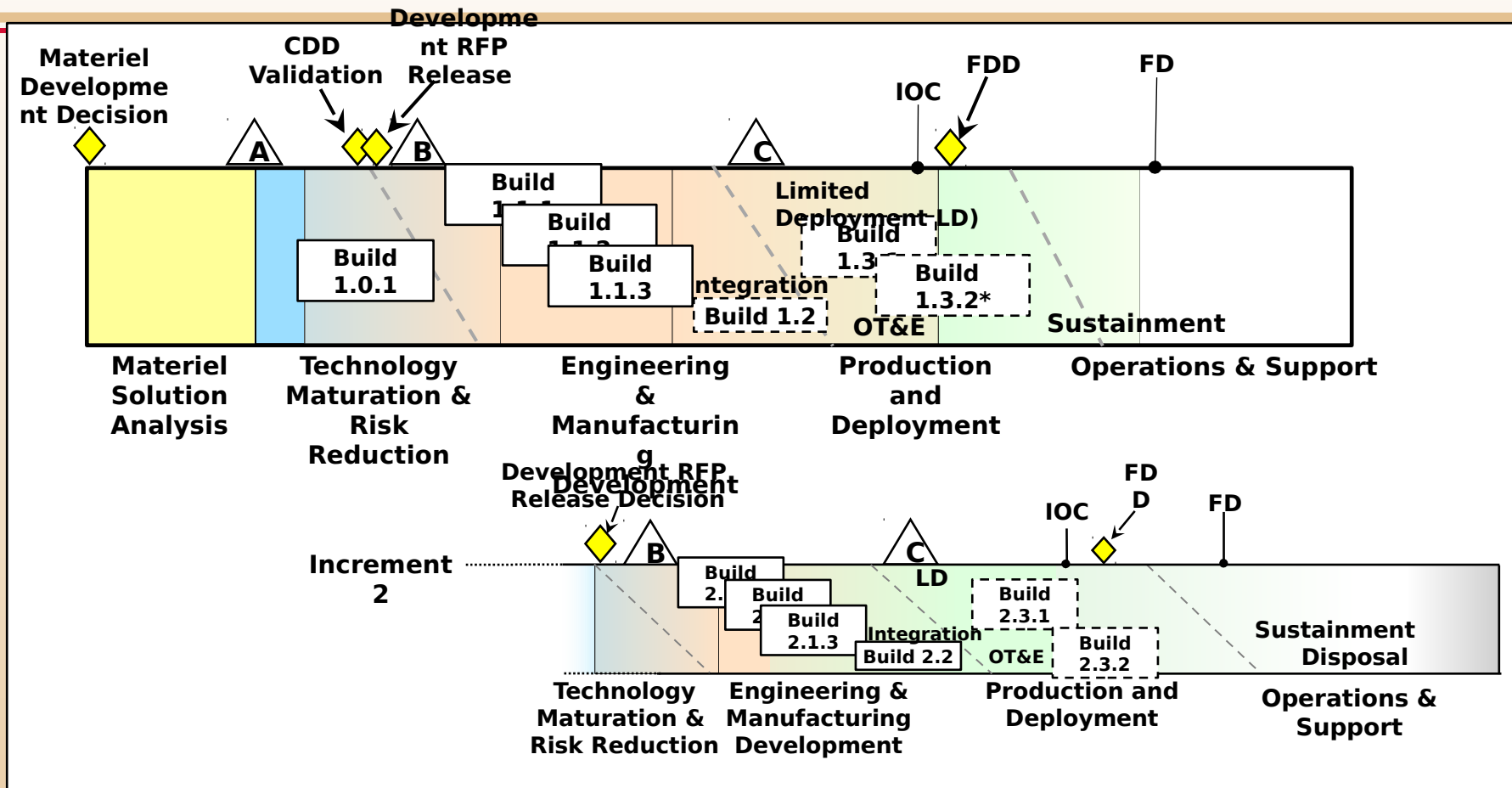
Model 3: Incrementally Fielded Software Intensive Program



This model will apply in cases where commercial off-the-shelf software, such as commercial business systems with multiple modular capabilities, are acquired and adapted for DoD. This model is distinguished by the rapid delivery of capability through multiple acquisition increments, each of which provides part of the overall required program capability.



Model 6. Hybrid Program B (Software Dominant)



- Depicts how s/w intensive product development can include mix of incrementally fielded software products or releases that include intermediate software builds
- Risk Management: Highly-integrated, complex s/w & h/w development risks must be managed throughout life cycle -- special interest at decision points and milestones



PREVIEW: Thursday Assignment

- Review GEMSIS IT Box CDD – hard copy info 1 binder per table and in K Drive
- Monday: Discussion template – 1 per student
Document binder – 1 per table
- Thursday 1 hour discussion
- Documents for Thursday review located in:
K:\ Clsrm and Conf Room Temp Files\ RQM 310 Oct 2013\
Exercises



PREVIEW: Thursday

IT BOX review responsibilities

Organization & Oversight

Flag-level oversight: _____

Co-Charis

- _____

Members

- _____

- _____

Table 1

Table 2

Table 4

Capabilities & Initial MOEs

GEMSIS Increment 2

Sponsor- _____

MDA - _____

Sustainment Costs

Per Year =\$ _____

Lifecycle Cost =\$ _____ FY_ to_

Rationale: _____

Table 5 RDP

Applications & System Software Development

Per Year =\$ _____

Lifecycle Cost =\$ _____ FY_ to_

Rationale: _____

Table 3



Resources

BBP 3.0	http://bbp.dau.mil	
NSS	http://www.whitehouse.gov/sites/default/files/docs/2015_national_security_stra	
QDR	http://www.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf	
Joint Electronic Library + JDEIS	CAC enabled https://jdeis.js.mil/jdeis/index.jsp	
JCIDS	CAC enabled https://intellipedia.intelink.gov/wiki/JCIDS	
DoD 5000.02	http://www.dtic.mil/whs/directives/corres/pdf/500002p.pdf	